Trade and Industrial Education
Course: Diesel: Brake Systems
Course Code # 5715
1 Credit

School Year _____

Term:____Fall____Spring

Student:	Grade:
Teacher:	School:
Number of Competencies in Course:	**38**
Number of Competencies Mastered:	
Percent of Competencies Mastered:	

STANDARD 1.0: Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
1.1	Exhibit positive leadership skills.		
1.2	Participate in SkillsUSA-VICA as an integral part of classroom instruction.		
1.3	Assess community and workplace situations and apply problem-solving and decision-making skills.		
1.4	Demonstrate the ability to work cooperatively with others in a professional setting.		

STANDARD 2.0: Students will demonstrate diesel technology practices, including Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) requirements for a diesel repair facility.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
2.1	Determine the safe and correct application for chemicals used in a diesel repair facility.		
2.2	Use protective clothing and safety equipment.		
2.3	Use fire protection equipment.		
2.4	Follow OSHA and EPA regulations affecting diesel service technology.		
2.5	Respond to safety communications.		
2.6	Pass with 100 % accuracy a written examination relating to safety issues.		
2.7	Pass with 100% accuracy a performance examination relating to safety.		
2.8	Maintain a portfolio record of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor.		

STANDARD 3.0: Students will apply fundamental science concepts to truck brake technology.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
3.1	Examine how physics concepts apply to brake system operation.		
3.2	Explore the application of fundamental laws of hydraulics to brake hydraulic systems.		
3.3	Analyze the characteristics and properties of liquids as applied to brake fluid.		

STANDARD 4.0: Students will properly test, diagnose, and repair air brake air supply and service systems.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
4.1	Analyze the function and operation of air supply and service systems.		
4.2	Test, diagnose, and repair or replace air supply and service systems and components.		

STANDARD 5.0: Students will properly test, diagnose, and repair air brake mechanical/foundation brakes.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
5.1	Analyze the function and operation of air brake mechanical/foundation brakes.		
5.2	Test, diagnose, and repair or replace air brake mechanical/foundation brakes and components.		

STANDARD 6.0: Students will properly test, diagnose, and repair air operated parking brake systems.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
6.1	Analyze the function and operation of the air operated parking brake system.		
6.2	Test, diagnose, and repair or replace air operated parking brakes and components.		

STANDARD 7.0: Students will properly test, diagnose, and repair hydraulic brake systems.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
7.1	Analyze the function and operation of the hydraulic brake system.		
7.2	Test, diagnose, and repair or replace hydraulic brake system components.		

STANDARD 8.0: Students will properly test, diagnose, and repair hydraulic brake mechanical/foundation brakes and power assist units.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
8.1	Analyze the function and operation of hydraulic mechanical/foundation brakes.		
8.2	Test, diagnose, and repair or replace hydraulic mechanical/brake mechanical/foundation brakes and components.		
8.3	Analyze the function and operation of power brake assist systems.		
8.4	Test, diagnose, and repair or replace power brake assist system components.		

STANDARD 9.0: Students will properly test, diagnose, and repair air and hydraulic antilock brake systems (ABS) and automatic traction control (ATC).

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
9.1	Analyze the function and operation of antilock brake systems (ABS).		
9.2	Test, diagnose, and repair or replace antilock brake systems (ABS) and components.		
9.3	Diagnose automatic traction control (ATC) problems and performs needed action.		

STANDARD 10.0: Students will demonstrate communication skills required in the diesel service industry.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
10.1	Communicate and comprehend oral and written information typically occurring in the diesel service workplace referring to brake systems.		
10.2	Solve brake problems and make decisions using a logical process.		
10.3	Use teamwork skills to accomplish goals, solve problems, and manage conflict within groups.		

STANDARD 11.0: Students will demonstrate interpersonal and employability skills required in the diesel service industry.

Learning Expectations	Check the appropriate Mastery or Non-Mastery column	Mastery	Non-Mastery
11.1	Analyze relationships between work ethics, organizational skills, and personal job success.		
11.2	Demonstrate attitudes conducive to working in a team.		
11.3	Compare the correlation between a clean orderly work environment and successful and efficient job performance.		
11.4	Assess implications of diversity for communities and workplaces.		
11.5	Develop individual time management and work sequencing skills.		

Additional Comments _____